For The Duration:
The Lessons of Protracted Conflict

A Monograph
by

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Armor

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by MAJ John M. Stawasz, USA, 55 pages.

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from a study of operations by the Confederate Army of Tennessee
during the American Civil War, using a theoretical model developed by
Mr. James J. Schneider in Theoretical Paper No. 3.

Mr. Schneider's model develops the idea that armed forces go
through stages of cohesion, disorganization, and disintegration at the
operational level because of the effects of the destructive tempo of
combat and the environment. He uses the relationships between four
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and a casualty component, to describe the ability of armed forces to
overcome the stress of military operations.

Using this model, an analysis of the operations of the Army of
Tennessee allows us to draw three lessons. The first is that armed
forces usually fight at less than perfect levels of cohesion and are
more prone to disorganization than expected. The second lesson is
that a defeated army must be pursued in order to prevent it from
reorganizing and continuing to conduct operations. The last lesson is
that initial expectations of military success are not guaranteed. In
order to continue operating in a protracted conflict it is essential to
develop branches and sequels for all military operations.

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Part I: Introduction

The purpose of this monograph is to determine the effect of protracted conventional conflict on armed forces so we can draw lessons for the future. It uses the operational model developed by James Schneider in Theoretical Paper No. 3 as a vehicle for analyzing the operations of the Confederate Army of Tennessee from 1861 to 1865. This model develops the idea that armies potentially go through successive stages of cohesion, disorganization, and disintegration when fighting at the operational level.(1)

The question arises of why do we need to analyze protracted conflict? History gives us many examples of short, decisive conflicts. The examples of the 1967 and 1973 Arab-Israeli Wars, the rapid British resolution of the Falkland Islands dispute with Argentina and the Allied Coalition's success in Operation Desert Storm all seem to indicate a lack of need to conduct this analysis.(2)

However, reviewing the last fifty years of history suggests that short, decisive conflicts are not conclusively the norm. Discounting the six years of World War II, there have been at least four conflicts that have not been of short duration. The French, Americans, and South Vietnamese fought the Viet Minh, or North Vietnamese, for almost thirty years from 1945 to 1975. During the same period the

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United Nations fought the North Koreans for almost three years, from 1950 to 1953, to force a cease-fire on the Korean peninsula. More recently, the Soviet Union conducted a counterinsurgency against Moslem guerillas in Afghanistan from 1979 to 1990. Lastly, we have the brutal Iran-Iraq War from 1980 to 1988.(3)

If short conflicts are not conclusively the norm based on historical examples, what about the capability of our current weapons to render protracted conflict obsolete? During Operation Desert Storm, precision-guided munitions, launched as cruise missiles, dropped as bombs or fired by artillery, destroyed targets although fired from miles away.(4) Coupled with the accuracy and seeming omniscience of modern satellite, aerial, and ground detection capabilities, this seems to imply that technology provides a solution that makes war efficient and decisive. In essence, nothing can hide from our current detection capabilities and once detected can be engaged and destroyed by precision guided munitions.(5)

However, once again history shows that technological superiority is transitory. As an example, during the Second World War, the German U-boat was to be the weapon allowing Germany to destroy Allied convoys and starve Great Britain into submission. Yet the U-boat's superiority was not long lasting. The Allies refined the use

of Asdic and Sonar for detection of underwater submarines and coupled it with the depth charge and Leigh Light, a searchlight mounted on bombers, for attacking U-boats. The Germans later developed an acoustic torpedo to home in on the sound of passing ships which helped the U-boat avoid detection by convoy escorts by increasing the U-boat's number of potential firing locations. The Allies countered this technology by trailing the Foxer device behind ships, which simulated the noise signature of a ship, acoustically causing the acoustic torpedo to target the Foxer device instead.(6) These examples imply that technology provides for a transitory superiority until either a new technology is developed, an old technology is improved, or one's opponent tries using a technology in a different manner.

Returning to the capabilities of the modern sensor and precision guided munitions system, the possibility exists that electronic cloaking devices or jammers, deceptions, and the use of subterranean facilities could partially defeat these systems. The enemy could incorporate analysis of satellite pass times to sequence his operations to avoid detection as the satellites passed overhead. Lastly friction, in the form of human errors, lack of redundancy to

confirm information, or an inability to compensate for a technology system failure could reduce the effectiveness of current systems.(7)

If technological superiority is transitory, could mass compensate for a lack of a tecnological advantage? This seems unlikely since recent changes in the structure and basing of our armed forces gives us a smaller force, primarily based in the continental United States, that is required to strategically deploy to its area of operations. Secretary of Defense Cheney's current "base force" concept has the Army reducing from 18 to 12 active divisions, the Air Force from 36 to 26 wings and the Navy from 15 to 12 aircraft carrier battle groups by 1995.(8) At the same time there has been no clear indication of a reduction in the need for armed forces to support the nation's interests. In his 1992 State of the Union Address, President Bush stated that "only the dead have seen the end of conflict" and that the United States is "the preeminent power" and "the undisputed leader of the age."(9) What this means for the future remains to be seen; however, it may mean that with multiple global commitments we may not have numerical superiority at even a local level in any one area.

Using the example of Desert Shield/Desert Storm, it took the United States and its coalition partners almost six months to deploy and position forces to attack. This preparation was conducted in a

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situation with secure ports and lines of communications, massive commercial assistance, and an enemy who did not attack during the build up of forces.(10) An assumption could be made that U. S. forces could deploy into a situation where the enemy was aggressive, the infrastructure was undeveloped and the enemy was able to at least contest the use of ports of debarkation and lines of communications into the theater of operations. If technology is unable to significantly compensate for these deficiencies, then we may not quickly gain a decision in our favor because of the inability to rapidly position our forces or generate the mass needed to win.

If technological superiority is not the solution, then we might face an opponent on overall equal terms if an enemy's numerical superiority could compensate for his technological deficiencies. With an overall parity between forces it is possible to look at combat as a game of chess. The inability of either side to gain an advantage and reach a decision leads to stalemate, if neither opponent will concede. In terms of warfighting this stalemate is a protracted conflict.

To prepare for a future protracted conflict, it is prudent to learn what lessons we can from a study of the Army of Tennessee since this army from its creation in 1861, through its final defeat in 1865, provides us with a worst-case scenario. Sometimes victorious,

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usually beaten, it fought outnumbered, across a vast area of operations and at the end of a lengthy and deficient logistical system in the pursuit of goals that seem contradictory, if not impossible to achieve. Paraphrasing Cohen and Gooch in Military Misfortunes, our inability to learn from the Army of Tennessee's experiences, or our inability to anticipate a protracted conflict could lead to our armed forces failing to accomplish their mission in a future conflict.(11)

Part II: The Schneider Model

We first need to ask why should we use Schneider's model to analyze the operations of the Army of Tennessee? The answer is that it suggests that armed forces go through successive stages of cohesion, disorganization, and disintegration when fighting at the operational level.(12) If we can determine the reasons why a cohesive armed force disorganizes and disintegrates, then we may be able to prevent or delay the point at which this process begins. This should prolong the effectiveness of our forces, allowing us to capitalize on the disintegration of our opponent. The model is depicted at Appendix 1.

Before we can analyze the Army of Tennessee's campaigns using Schneider's model, we must first discuss and develop the relationships between the terms and components. The first term,

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destructive tempo, is the rate of destruction faced by the army. The last three terms, cohesion, disorganization and disintegration represent the army's stage of organization and ability to respond to the stresses of the destructive tempo of operations. The four components consist of three theoretical concepts; the physical, cybernetic, and moral domains; and a casualty component.(13) These will be discussed in Part III.

Schneider's model uses the analogy of the army at the cohesive stage as a solid block of lead with the battlefield as a crucible. At the operational level this crucible is expanded to include the entire theater of operations. As the army conducts operations, the destructive tempo caused by the friction inherent in military operations, the physical domain, and combat with the enemy acts as heat to begin the breakup of the solid lead block. The faster the rate of military operations, the greater the destructive tempo, and the sooner the army begins the disintegration process. At a certain point enough heat is generated to cause the block of lead to change into liquid lead which symbolizes the stage of disorganization. As the process continues, enough heat is generated to cause the liquid lead to vaporize, which symbolizes the stage of disintegration.(14)

Unit cohesion implies a certain level of combat effectiveness by simply "sticking together."(15) Anthony Kellet, in _Combat Motivation_, writes that cohesion is the feeling of belonging and solidarity that develops because of group relationships. These relationships determine a unit's willingness to fight, its resistance to breakdown, and its relationship to the army as a whole.(16) Cohesion is often expressed as a unit's morale. In war game rules a unit's morale factor is defined as "the glue that holds a combat unit together ... it reflects more than the spirit of the men, it is also the effectiveness of the unit ... to cope with danger, real or perceived, and to ... maneuver."(17) When a unit is at the cohesion stage, it quickly executes the orders of its commander and follows its institutional procedures to complete routine tasks. The Army of Tennessee never seemed to develop a sense of army cohesion but instead developed strong regimental or brigade ties. This means that the army as a whole did not fight cohesively but rather, paraphrasing Schneider, the portions of the army were already in disorganization and disintegration long before they were subjected to destruction.(18)

Using war game rules, we find that disorganization, defined as disorder, implies a breaking down of cohesion. Units tend to move on the battlefield and react to changes of order at a slower pace. Some

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units may not attack or even fire their weapons, but, in general, will continue to execute their missions, although the leaders must more closely supervise the efforts of their units.(19)

As the unit continues operating at a high destructive tempo, it disintegrates. At this point the unit is almost incapable of conducting combat operations. Survival becomes an obsession with the majority of its units and soldiers. This does not mean that no units are attempting to complete their missions, but that there are few army-level military actions being attempted.(20) At this stage leaders must inspire and lead their soldiers into battle, and rally them when they attempt to flee. If the leaders cannot hold the unit together, it will act like the lead vapor and disappear.(21) Since we have completed defining the terms and relationships of Schneider's model, we can now analyze the components of Schneider's model.

Part III: The Components of the Schneider Model

We will analyze the components of the model using applicable examples from the operations of the Army of Tennessee. Once we have determined the validity of the components, we will analyze the model's ability to explain the effects of combat on armed forces.

Let us start our analysis of the model by defining the physical domain, which includes the effects of geography, such as terrain and

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weather, as well as various aspects of the combat forces themselves. These aspects include weapons, equipment, munitions, and the ability to move and sustain armed forces in combat.(22)

The first factor, military geography, is defined as "the specialized field of geography dealing with natural and man-made physical features that may affect the planning and conduct of military operations."(23) It is simply the characteristics of the area which affect how armed forces conduct their operations. Chris Donnelly, a noted analyst of the Soviet military, believes that "geography is probably the single most important factor in determining a nation's concept of war." He includes concepts such as the use of rivers for military transportation, the importance of rail transport, and the ability of armed forces to move cross-country.(24)

As depicted in Appendix 2, the initial defensive trace of the Army of Tennessee, stretched over four hundred miles in length from the Appalachian Mountains in the East to the Mississippi River Valley in the west.(25) Its area of operations was dissected by the Alabama, Chattahoochee, Cumberland, Tennessee, and Mississippi Rivers. These rivers served four purposes: as an obstacle to movement, as an obstacle incorporated into a defensive line for combat, as an avenue of approach with enhanced movement and resupply capability due to

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the use of river transportation, and as a way to provide mobile artillery fire with river gunboats.(26)

The army's area was divided into two parts by the Appalachian Mountains and accompanying foothills. The mountains had the effect of channeling the movements of both armies into obvious routes of advance and retreat. The rugged nature of the terrain, coupled with the scarcity of a good overland transportation system and the rivers, made certain locations that were situated at the nexus of river, valley, and railroad systems, such as Chattanooga, Nashville and Knoxville, into key terrain that had to be retained.(27) For a period of time starting in 1862, the area was administratively made into two separate departments by President Jefferson Davis in an attempt to better ensure the defense of both parts. However, this had a detrimental effect on the Confederate's ability to concentrate troops for the Army of Tennessee's 1862 invasion of Kentucky.(28)

In describing the man-made features of the area of operations we must look at the railroads, roads and the dispersed nature of the urban and industrial regions of the area. The railroads were the key to the Army of Tennessee's ability to move and concentrate, because the army never acquired enough wagons and horses to move itself. The roads were difficult to use for large scale movements during the

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spring and fall rains, which produced mud, and the summer was not much better since the heat and resulting dense dust on the roads initially caused straggling due to exhaustion.(29) In addition, the Confederacy did not have the industrial capability to build an effective riverine force in the army's western area of operations.(30)

Surprisingly, the Confederacy's major railroads in the west were in poor condition not only in terms of the roadbed, but also because of a lack of maintained locomotives and rolling stock.(31) In addition the railroads did not provide direct services in the directions that the army needed to move. A unit attempting to move from Nashville to Knoxville had to travel over four hundred miles by rail, when the actual straight line distance was only two hundred miles. A second line, used by units moving from northern Mississippi to eastern Tennessee, was almost six hundred miles long.(32)

The region was considered to be the heartland of the Confederacy because of its critical manufacturing centers, food production areas, available manpower, and mining and refining sites for the raw materials needed for war. Unfortunately for the army, these areas were dispersed throughout the department. Major resource centers were located at Chattanooga, Memphis, Nashville, Montgomery, and Rome, but there were numerous smaller regions that were equally

important. Altogether, there were too many areas for the army to defend. The requirement to defend these areas restricted the army's ability to maneuver against the attacking Union armies.(33)

At the operational level, the technology of both armies was similar with neither side fielding a technology that gave it superiority. However, the Union's use of river transportation to conduct large scale movements by both land and riverine forces to envelope Confederate defensive positions was a significant use of an existing system.(34) This system was used for the reduction of Forts Henry and Donelson in 1862, as well as for the movement of General U. S. Grant's Army to Pittsburgh Landing which resulted in the battle of Shiloh.(35)

The need to sustain large field armies throughout the conflict caused the armies to develop ponderous logistical systems. Initially both sides suffered from shortages of clothing, food, and weapons due to bureaucratic mismanagement.(36) However, the Union's ability to develop a functioning and reliable line of supply and communications built around an improved railroad and telegraph system did much to give the Union Army an advantage later in the war. This was especially true once the Union armies left the major rivers in late 1863 and began their move towards northern Georgia.(37) While

Clausewitz believed that an army on the defensive should get stronger compared to the attacker as it retreats into the interior of its country, we find that this was not the case for the Army of Tennessee.(38) The Confederate Commissary General prohibited the army from collecting supplies and recruits from its rear areas. Although the army was forced to defend these areas, the resources were reserved for General Robert E. Lee's Army in Virginia.(39)

We have spent some time describing the physical domain since according to Schneider the "physical domain of war is concerned with the whole process of destruction." This means that an army may start the war at peak form, but the effects of geography, weather, and logistical shortages will all tend to erode an army's effectiveness long before it even gains contact with its enemy.(40) As our examples from the Army of Tennessee have shown, the physical domain is a valid component.

According to Martin van Creveld the second component, the cybernetic domain, which he calls command, has three categories: organizations, procedures and technical means. He believes the whole purpose of command is to "make use of information in order to coordinate people and things toward the accomplishment of their missions."(41) By another definition the cybernetic domain is

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concerned with "the science of control and communication, with
special reference to self-controlling or adaptive systems."(42)
Schneider defines the cybernetic domain with four factors:
communications, control, command and organization.(43) Regardless
of the definition, in order for a commander to successfully exploit
the cybernetic domain, he must develop a system that is efficient in
its ability to: receive and process information, make decisions based
on new situations and objectives, and process and transmit orders to
his subordinate organizations.

In order to transmit and gather information an effective
communications system is required. During the American Civil War
such systems were rudimentary. The telegraph usually enabled the
army commander to talk directly to the government in Richmond if
the telegraph system was operational and the army commander had
access to it. The South was at a disadvantage, compared to the North,
throughout the war because of a lack of equipment, as well as losing
key communications hubs to advancing Union armies.(44)

While telegraph provided a fairly reliable system to communicate
with the higher command authorities in Richmond, the system to
subordinate elements was tenuous at best. Mounted messengers,
signal flags, signal shots by cannon, or even the use of an event

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driven system, such as starting attacks based on hearing the start of another division's attack, were more common.(45) Because of the poor tactical communications system, the army commanders throughout the war moved forward in an attempt to ensure that attacks were started, orders were followed, or to gather information from forward units. As a result, Generals Albert S. Johnston at Shiloh, Braxton Bragg at Chickamauga, and John B. Hood at Franklin, all made bad decisions.(46)

From the control aspect, a cybernetic system focuses the organization's efforts and corrects deficiencies or deviations in the organization's conduct of operations to ensure that the commander's objectives are obtained. Current control systems rely heavily on automation, computers or emerging artificial intelligence systems to complete these tasks. The Army's Maneuver Control System and components of the Navy's AEGIS target acquisition and engagement systems are examp' .s of modern automated control systems.(47)

The Army of Tennessee's control system was much cruder. The method of control revolved around the commander and a few key staff officers who found it necessary to physically observe and coordinate with subordinate commanders in order to ensure missions were accomplished. Martin van Creveld calls this method the directed

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telescope. He believes that this is a very effective system, if properly used, since it cuts through the tendency of subordinate headquarters to summarize information to the point that it is not useful to the commander for making decisions. At the same time it reduces the tendency of subordinate units to develop a semi-independent attitude towards executing the commander's orders.(48)

Unfortunately, the Army of Tennessee seemed to be composed of semi-independent units that were constantly failing to execute the commander's orders. Part of this was due to the personality of General Bragg, the army's commander from 1862 to 1864, who was rather gruff and aloof towards his subordinates. He also tended to suggest missions rather than give clear and precise orders.(49) But even when he was replaced by General Joseph E. Johnston in 1864, the situation did not improve much. According to Thomas Connelly, the Army of Tennessee suffered from too many clashes between too many egocentric personalities, each of whom thought they were potentially the better commander for the Army of Tennessee. Generals Leonidas Polk, Gideon Pillow, William Hardee, Edmund Kirby Smith, and James Longstreet all schemed and conspired among themselves or with their influential supporters in the Confederate government, to remove the current commander. Many times the Army commander did not even get

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the same reports from his subordinates as they sent to their

supporters in Richmond.(50)

The concept of command includes aspects of control, but with the

authority to establish objectives or aims for the organization to

accomplish. It also authorizes the commander to organize his forces

to allow them to use their capabilities to best advantage.(51) From

1861 to 1865, the army went through ten major reorganizations as

either the Confederate government restructured its military

departments and commanders, or the army commander restructured

his subordinate corps and divisions. Each of these required

subordinate commanders to build new staffs, develop new procedures,

and create new personal and informal relationships between staff

officers and commanders. The constant reorganization of the

command structure of the Army of Tennessee itself, played a part in

reducing the Army's effectiveness in the cybernetic domain.(52)

Starting in 1862, General Albert S. Johnston was unable to

properly coordinate the defense of Forts Henry and Donelson because

General Polk, the commander of the army's western forces, focused

his attention on the defense of Memphis and did not ensure the forts

were prepared to defend against a Union attack.(53) When General

Bragg replaced General Pierre G. T. Beauregard after the Battle of

Shiloh in 1862, he was faced with a series of conspiracies and intrigues by several of his officers that undermined his ability to get the army to rapidly follow his orders. As an example, at the battle of Murfreesboro in the Winter of 1862-1863, General Bragg received advice from two of his corps commanders, Generals Benjamin F. Cheatham and Polk, to discontinue his attack and to retreat, even though General Bragg had already given orders to continue the attack.(54) Partly because of this advice, General Bragg ordered a retreat instead of continuing his attack towards Nashville, Tennessee. Lastly, General J. E. Johnston was constantly criticized by his corps commanders for his failure to stand and fight the Union Army on the approaches to Atlanta in 1864, even though these same subordinate commanders found fault with the Johnston's proposed defensive positions and urged continued retreats.(55)

Part of the constant turmoil was a result of the organization of the Confederate's military departments. The purpose of these departments was to task-organize military forces to accomplish specific missions. The military commanders were given few specific directives and little guidance; instead, they were given the authority and discretion to complete their missions as they saw fit.(56)

In theory, the military department commanders organized their units to best accomplish the mission. However, Generals Bragg and Hood both made changes to eliminate the influence of subversive or untrustworthy subordinates. Changes were made on the basis of personality, the subordinate's political supporters in Richmond and the support given to the army commander in past conflicts. Many times the conspiratorial air permeating the army's units made improvement extremely difficult. At one point several corps, division and brigade commanders circulated a petition to remove General Bragg from command.(57) At another, Hood's chief of staff, General W. W. Mackall, rode off into retirement with all his records even as the army was fighting General William T. Sherman's army only two miles from Atlanta.(58) Given the atmosphere of mistrust it is surprising that the army was able to function at all, yet alone fight.

This atmosphere may have been overcome if the senior leadership had proved competent. Unfortunately this was not the case. Imprecise and vague orders were partly the reason for General Bragg's ineffectiveness. Another was his indecision. Even at the point of victory at Chickamauga he was unable to decide on a course of action that would continue the pursuit of the retreating Union Armies.(59)

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Although General J. E. Johnston is credited with being a more astute commander and strategist, this does not seem to be the case. According to Thomas Connelly, Johnston's reputation is based more on what he could have done, rather than what was actually accomplished. Although he promised to attack and destroy Sherman's Army if the conditions were right, he never seemed to find the right conditions. His army repeatedly retreated from position to position, until he was relieved, without ever attacking or trying to wrest the initiative from General Sherman.(60)

Lastly, the effects of General Hood's leadership did little but destroy the army. He believed that success in battle was partly· determined by the amount of casualties inflicted on the attacking force. At the battle of Franklin, Tennessee he was unable to develop a course of action other than a frontal assault against the prepared Union defenses. Although he denied it, the army probably suffered its greatest number of casualties for a single day of combat in its vain attempt to defeat the Union defenders.(61) Hood's ability to determine a plan of action prior to Franklin was not much better. He constantly shifted from plan to plan, forcing his army to march long distances for little purpose. At times, General Beauregard, now the theater commander, could not even determine where Hood's Army was

going or trying to accomplish. As a result he could not coordinate

transportation, supplies and reinforcements for Hood's army.(62)

By itself there does not seem to be much that we can learn from

the Army of Tennessee's cybernetic system. Today we have developed

reliable communications systems, institutionalized staff

organizations and procedures, and developed concepts of command to

determine decision-making responsibilities. What is important is the

effect of the Army of Tennessee's inefficient cybernetic system on

its operations, and the effect of protracted conflict on the cybernetic

system, which will be discussed later.

Schneider's third component, the moral domain, focuses on the

disintegration and breakdown of will in a force.(63) The importance

of this domain is emphasized by Clausewitz when he wrote that "the

moral elements are among the most important in war. They

constitute the spirit ... that moves and leads the whole mass of

force."(64) He believed that the principal moral elements were; "the

skill of the commander, the experience and courage of the troops, and

their patriotic spirit."(65) Analyzing these elements shows us the

importance of group cohesion and unit esprit in maintaining the Army

of Tennessee's ability to continue to fight.

Surprisingly, the esprit of the troops remained high until the

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army's final surrender in 1865. Despite shortages in supplies and transportation, high casualties, ineffective leadership, and defeat, the Army of Tennessee continued to fight. Thomas Connelly believes that this morale was a result of the peculiar situation of the Army. Because of the constant turbulence in the command structure of the Army, the soldiers never developed an army-level esprit like the Army of Northern Virginia. Instead they developed such an intense pride in their brigades and regiments that it allowed them to sustain heavy casualties and endure miserable conditions. In modern terms they developed a sense of group cohesion. Another reason was that the core of the army was built around Tennessee regiments. After the retreat from Tennessee, these regiments continued to fight to return to their homes and families they left behind.(66)

Schneider does not define the casualty component. For purposes of this study we define a casualty as "any person who is lost tc the organization by reason of having been declared dead, wounded, injured, diseased, interned, captured ... (or) missing."(67) We also include soldiers who were transferred out of the Army of Tennessee to support other units. This definition allows us to look at the effect of any loss of manpower on the army.

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In summary, the model's four components describe the physical, cybernetic, and moral domains, as well as the effect of casualties. Having looked at all of the components, terms and relationships of Schneider's model, it is time to analyze the conduct of operations by the Army of Tennessee from 1861 to 1865.

Part IV: Operations of the Army of Tennessee

In order to determine the effect of protracted conflict on the Army of Tennessee, we will briefly outline the history of the army. For each phase of operations we will discuss the effects of major battles, leadership changes, and significant reorganizations. In addition we will highlight actions by the Union forces that affected the Confederate army.

In 1861, when Tennessee Governor Harris offered his state's armed forces to the Confederacy, he did not anticipate a long conflict with the Union. He believed the neutrality of Kentucky would protect most of his northern border, and that his forces would protect the remaining exposed portions along the Mississippi River and the city of Memphis until a settlement was reached. Yet in little over three months, his forces, under the command of General Polk, invaded Kentucky and seized the town of Columbus as a way to protect the river valley and Memphis. By this action the Confederate commander

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widened the areas that the Union could use to attack into Tennessee and stretched his defensive requirements almost beyond the capabilities of his small army.(68) The stage was set for a conflict of almost four years between this "Army of Tennessee" and its Union opponents for control of the heartland of the Confederacy. It should be noted at this point, that the Confederate forces fighting in Tennessee were still not officially called the Army of Tennessee until November 1862, but this paper follows Thomas Connelly's use of this name to avoid confusion.(69)

The assumption of command of the Confederacy's Second Department in September 1861, by General Albert S. Johnston, with his prewar reputation and actions during the Union's advance on Richmond, seemingly provided the Confederate forces in Tennessee with the leadership needed to fight a decisive war.(70) General Johnston soon moved with his main force to Bowling Green, Kentucky, which not only protected Nashville and Middle Tennessee, but also positioned his forces to continue north to the Ohio River.(71) However, six months later his soldiers were straggling into Cornith, Mississippi to reorganize. How could this have come about?

From the start, Johnston's main force was not cohesive. In terms of Schneider's model this force was in the liquid lead stage of

disorganization. While the soldiers were highly enthusiastic, most of them were green recruits who had never seen combat. The officers were just as unprepared to lead their men. Consequently, the force was not very efficient in completing its tasks in a timely manner. There was a great deal of friction and confusion in simply moving northward. However, as Johnston's main force remained at Bowling Green, its effectiveness improved while skirmishing with Union forces.(72) Unfortunately, other units on its flanks did not.

The force east of Bowling Green was also green and disorganized; however, it was required to attack a Union force in fortified positions to prevent it from occupying eastern Tennessee. At the Battle of Mill Springs in December 1861, General Felix Zollicofer's Confederate force was defeated. The shock of this quick defeat, coupled with Zollicofer's death, caused the eastern Confederate force to disintegrate and scatter. This exposed the eastern flank of the forces at Bowling Green.(73)

Less than two months later the forces to the west of Bowling Green were driven from their defensive positions at Fort Henry on the Tennessee River. Even worse, the garrison of Fort Donelson defending the Cumberland River, although reinforced and initially successful in defending the fort, was forced to surrender on 16 February 1862.

This left Johnston's main force at Bowling Green in danger of encirclement.(74)

At this point the main force began to withdraw towards Nashville. However, the friction of conducting a withdrawal, coupled with a lack of supplies and the cold, soon began to cause the force to disorganize. When the soldiers reached Nashville, they found that the city's defenses had never been finished. This exacerbated the main force's stage of disorganization and it began to disintegrate, even though there was little or no direct pressure applied by the Union forces.(75) In effect, the loss of morale in the soldiers and officers of the center force resulting from the retreat from Bowling Green, the unpreparedness of Nashville's defenses, and the defeat of the flanking forces, caused Johnston's army to almost disintegrate without fighting a major battle.

Fortunately for the army there was no organized pursuit by the Union forces and it was eventually reorganized with additional Confederate forces under the command of General Beauregard at Cornith. General Beauregard's willpower forced the army to become more cohesive and he gradually gained the position of *de facto* leader of the Army of Tennessee. While the army was still not operating at

peak effectiveness, it reduced its high desertion rate and was preparing to resume the offensive.(76) '

In April of 1862, this army, while still nominally under the command of General Johnston, moved to attack Grant's Union army located at Pittsburgh Landing, near Shiloh Church. Generals Johnston and Beauregard hoped to catch Grant's forces and destroy them before they could join with General Don Carlos Buell's army. During the march to Shiloh, the enthusiasm of the soldiers was again high. This compensated to a certain degree for poor staff work in organizing the march, surveying the terrain prior to the attack, and collecting supplies.(77) The Confederate's attack on 6 April achieved tactical surprise against the Union forces in their camps, partly due to the inexperience of the Union forces and lack of security. However, the poor trafficability of the attack routes, the bad staff work in moving the army into its attack positions and the inability to employ the second echelon of troops at a decisive point, caused the attack to fail. In addition, the poor supply situation of the Confederate forces caused many soldiers to stop and loot the abandoned Union camps, rather than continue the attack. The end result was that the army, although initially victorious in spite of staff inefficiency, became disorganized by the destructive tempo and casualties. The next

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morning the Union forces counterattacked and pushed the Confederates out of the Union camps. By four o'clock in the afternoon, the Confederate army started its retreat to Cornith since General Beauregard, now the commander after Johnston's death, realized that the army could not continue to fight and still survive.(78)

At Cornith, General Beauregard was replaced by General Bragg, who immediately started planning an offensive into Kentucky to regain Tennessee and to bind Kentucky to the Confederacy in order to gain supplies and recruits for the army.(79) In July 1862, General Bragg moved his army to Chattanooga, Tennessee to block the Union advance on that city and to gain a base of operations for his offensive. At the same time this moved Bragg's army closer to eastern Tennessee where he was to coordinate his offensive with General Kirby Smith. On 14 August, General Kirby Smith started his offensive, forcing the Union Army to evacuate the Cumberland Gap and approached Lexington, Kentucky. Bragg started his own offensive and soon had General Buell, the Union commander, retreating north to defend Louisville, Kentucky. Despite this success, Bragg could not gather the supplies needed to sustain his armies in Kentucky.(80)

At this point, the lack of supplies and the Confederate's departmental organization caused the offensive to falter. Since Kirby

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Smith was not subordinate to Bragg, but rather simply coordinated his actions with him, Bragg could not order a concentration of all Confederate forces. Instead he was forced to face the Union counteroffensive on his own. While Bragg was away at the inauguration of the new Confederate governor of Kentucky, his army began to retreat in the face of a Union attack. At this point Bragg ordered an attack at Perryville, Kentucky on 8 October 1862, to destroy what he believed was an isolated portion of the Union Army. Instead his army was faced by Buell's main army and his attack was repulsed. Ironically Bragg gained command over Kirby Smith's forces on 10 October, and he quickly ordered him to join the main army.(81)

Bragg, now disheartened by the failure of his offensive, began to retreat to Murfreesboro, Tennessee. Because of Bragg's discouragement, supply difficulties, and the army's declining morale caused by the need to abandon Kentucky, the Confederate army was on the verge of disintegration once again. But Buell's pursuit was so lethargic that Bragg was allowed to retreat with no interference.(82)

General William S. Rosecrans, replacing General Buell as Union commander, soon began his offensive to occupy eastern Tennessee. However, in the mean time, General Bragg effectively reorganized his army into two corps under Generals Polk and Hardee, as well as

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concentrating his cavalry under General Joseph Wheeler. Bragg's

cavalry organization proved so effective in determining the

movements of Rosecrans's army that Bragg decided to concentrate his

army and fight near Murfreesboro, Tennessee to defeat the Union

advance.(83)

On 31 December 1862, the Confederates attacked and surprised

the Union Army. In a four day brawl much like Shiloh's first day, the

Confederates slowly pushed back the larger Union Army, but this was

not qualitatively the same Confederate army that had fought at

Shiloh. Time after time it successfully attacked and drove back

larger Union forces, almost encircling them. There was little

straggling and almost no loss of control by unit leaders, despite

heavy casualties. In the end it was Rosecrans's refusal to accept

defeat, coupled with the Confederate's inability to resupply their

forces that blunted the Confederate attack. Bragg's army could

simply not continue the attack without disintegrating in the face of

Union firepower. After taking slightly over 12,000 casualties by the

end of the fourth day of battle, General Bragg realized that he could

not win and retreated towards Chattanooga.(84)

Bragg's mission now became the defense of Chattanooga, a key

railroad junction, which also prevented the Union from accomplishing

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President Lincoln's goal of liberating the pro-Union population of eastern Tennessee and northern Georgia.(85) Initially both sides used cavalry raids in fruitless attempts to disrupt each other's supply organizations. These raids cost Bragg's army 4,000 cavalrymen.(86) On 26 June 1863, General Rosecrans began his offensive and by adroit maneuvering forced Bragg to withdraw from Chattanooga. But as he continued to maneuver, Rosecrans blundered into the concentrated Confederate army near Chickamauga in September.

In the previous days, the Army of Tennessee reorganized and incorporated elements of General Longstreet's corps that had arrived from Virginia to help crush the Union army. After a series of inept attempts at attacking isolated Union forces, Bragg's army began its final preparations for a concentrated attack. On the eve of battle, he surprisingly reorganized his army into two wings under Generals Polk and Longstreet which temporarily reduced the effectiveness of the command structure.(87) On 19 September, the Confederate attack succeeded as Longstreet's forces entered a gap in the Union lines and disrupted the Union defenses. As the Union army began to disintegrate, Bragg could not decide what to do. Eventually his subordinates and cavalry reconnaissance reports convinced him to

pursue the Union army, but the delay allowed the Union army to retreat and establish a defense at Chattanooga.(88)

At Chattanooga, Bragg divided his forces. He sent Longstreet's corps to attack the Union Army at Knoxville, Tennessee, over 100 miles away.(89) His remaining forces prepared defenses on Lookout Mountain and Missionary Ridge. The army expected to easily defeat any Union attack because of the formidable nature of the mountainous terrain. Unfortunately Bragg poorly positioned the army.(90)

When the reorganized Union Army, under General Grant, began its attack to break out of Chattanooga it completely shattered the Confederate positions and Bragg was forced to retreat. The Confederate army disintegrated, not so much because of direct combat with the enemy, but rather because the Union attack had rapidly overrun thinly manned defensive positions that were regarded as impregnable.(91)

In May 1864, General Joseph E. Johnston replaced Bragg as commander of the Army of Tennessee and prepared his forces to defeat the Union army, now under the command of General Sherman, in its attempt to capture Atlanta, Georgia. With the arrival of Polk's corps from Mississippi, Johnston organized his army into three corps under Generals Polk, Hood and Hardee. His exhortations to his troops,

the orders to his subordinates and the messages to the government in Richmond, all indicated that he was only waiting for the opportunity to attack and destroy an isolated part of Sherman's army. Johnston believed that this would halt Sherman's advance on Atlanta. Unfortunately Johnston's words were hollow. During the summer of 1864, he retreated from defensive position to position. Even his defensive victory at Kenesaw Mountain could not stem the Union advance as his army was continually maneuvered out of position. Finally his army was driven almost to the defenses of Atlanta and he was replaced by General Hood.(92)

President Davis's choice of General Hood as commander of the army was based on Hood's reputation as a bold and offensive-minded leader. In spite of his reputation and repeated attempts at blunting the Union advance, General Hood was also unsuccessful and he was slowly driven into Atlanta and partially encircled. His army abandoned the city near the end of August 1864. Confederate casualties, since the start of Sherman's offensive totaled 27,565 and the army's morale slowly eroded.(93) In terms of Schneider's model, the destructive tempo was slow enough that the army did not disintegrate, even though it suffered severe casualties. What it did

though, was to place the army at a point where a slight increase in the destructive tempo would shatter its fragile cohesion.

Even though Sherman did not pursue Hood's army, Confederate morale continued to drop and President Davis travelled to confer with General Hood while his army reorganized. Because of the overall Confederate situation, they decided that the only way to stem Sherman's probable advance was to maneuver against his line of communications and supply line to the north. Unfortunately both men ignored the possibility of Sherman marching to the east.(94)

With the move to the north, Confederate morale again started to improve, although many officers believed it was much too low for an attack. Luckily, Hood's mobility kept him from having to accept battle at a disadvantage, but he was also unable to seriously damage Sherman's lines of communications and could not prevent Sherman's army from maneuvering towards the Atlantic Ocean. Hood realized that he would have to attack and did so at Spring Hill, Tennessee when he had a chance to destroy a portion of the Union army. His attack miscarried and the Union forces withdrew towards Nashville. Hood pursued and again attacked the Union forces in their fortified positions near Franklin, Tennessee. Despite ferocious assaults, Hood's soldiers were unable to break the Union lines. The net effect

for the attack was 6,252 Confederate casualties and the Union forces withdrew into stronger defensive positions at Nashville.(95)

After the attack at Franklin, Hood seemed to lose touch with reality. While his troops began to lose heart and wonder what they were attempting to achieve, Hood's spirits soared and he believed that he could still beat the Union forces by occupying a position that would force the larger Union forces to attack him. Once he had beaten this assault he could counterattack and crush the Union army.(96)

By 7 December 1864, Hood's army moved into defensive positions south of Nashville. On 15 December, the more powerful Union army attacked, and by evening Hood's army was broken, losing 4,462 men to the Union as prisoners alone.(97) Realizing that he could not continue the attack, or avoid being crushed by the Union army in his present positions, he opted to retreat. Fortunately for Hood's men the weather turned bad with heavy rains, and the Union cavalry could not pursue until their horses were brought forward. Hood's army retreated to Tupelo, Mississippi where he tendered his resignation to President Davis and was replaced by General Johnston.(98)

The rest of the story of the Army of Tennessee shows a core of disciplined soldiers continuing to fight against tremendous odds with little hope of success. On 16 March 1865, part of the army under

General Hardee tried to stop Sherman's advance at Averysboro, North

Carolina and was defeated. On 19 March, Johnston's entire army tried

to stop Sherman at Bentonville, North Carolina and was also defeated.

At this point Johnston was directed to join with Lee's Army of

Northern Virginia, which was attempting to break out from the Union

encirclement of Richmond. On 26 April 1865, General Johnston

formally surrendered his forces after learning that Lee's army had

surrendered. The Army of Tennessee ceased to exist.(99)

Part V: Conclusions

With the demise of the Army of Tennessee, our analysis of its

operations from 1861 to 1865, using Schneider's model is complete.

As we have seen, Schneider's model provides us with a framework for

analyzing the organization and effectiveness of an armed force in

terms of the physical, cybernetic, and moral domains. His use of the

concepts of cohesion, disorganization and disintegration gives us

criteria to evaluate the ability of an armed force to continue

operations, despite the degrading effects caused by the destructive

tempo of operations, casualties, and the effects of the physical

domain. Using the concepts of Schneider's model and the operations

of the Army of Tennessee, we can draw lessons that may be useful in

a future protracted conflict.

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The first lesson is that armies usually fight at less than perfect levels of cohesion for a variety of reasons. In the physical domain, Bragg's invasion of Kentucky in 1862, was to be sustained by the supplies and recruits that he could acquire in Kentucky. Since the supplies and men were not forthcoming, which was the primary purpose of the army's advance into Kentucky, the army continued to weaken and disorganize as it marched north towards Louisville. The destructive tempo of combat at Perryville simply hastened the disorganization of Bragg's army.

In the cybernetic domain, we find that the commander's inability to obtain reliable information often causes him to make poor decisions. These decisions range from Hood attacking in the wrong direction at Spring Hill in 1865, or perhaps worse, like Bragg at Chickamauga, to avoid making decisions and missing a great opportunity to destroy the enemy's army. The effectiveness of the army in the cybernetic domain can also be severely degraded because of personal friction between the senior leaders of the army. The conflicts between Bragg and almost all of his subordinates, caused the army to waste valuable time and energy in conspiracies to remove Bragg from command.

In the moral domain we find that the success of an armed force seems to rely on two levels of cohesion. The first is at the soldier and unit level as exemplified by the high morale and cohesion of the regiments and brigades of the Army of Tennessee. The second is the Army's overall level of cohesion and morale. If the army's subordinate units can maintain a high level of morale, then the army may be able to continue operations despite having little sense of an overall army identity. While the army as a whole may not function efficiently, at least certain portions of it will. If, however, both the army and the subordinate units do not have a cohesive identity, then the army will probably shatter, much like Johnston's army on the retreat from Bowling Green, without even suffering a defeat in battle.

The second lesson from the operations of the Army of Tennessee is that an enemy army must be vigorously pursued and destroyed when it has been beaten in battle, or is badly disorganized by the defeats of other friendly forces, the lack of supply, or poor leadership. This pursuit does not allow the enemy force time to reorganize and continue to fight. More than once, the Army of Tennessee was on the verge of disintegration when it was given time to regain a higher level of organization. After the retreat from Bowling Green, Johnston's army was allowed time to move to Cornith, join with
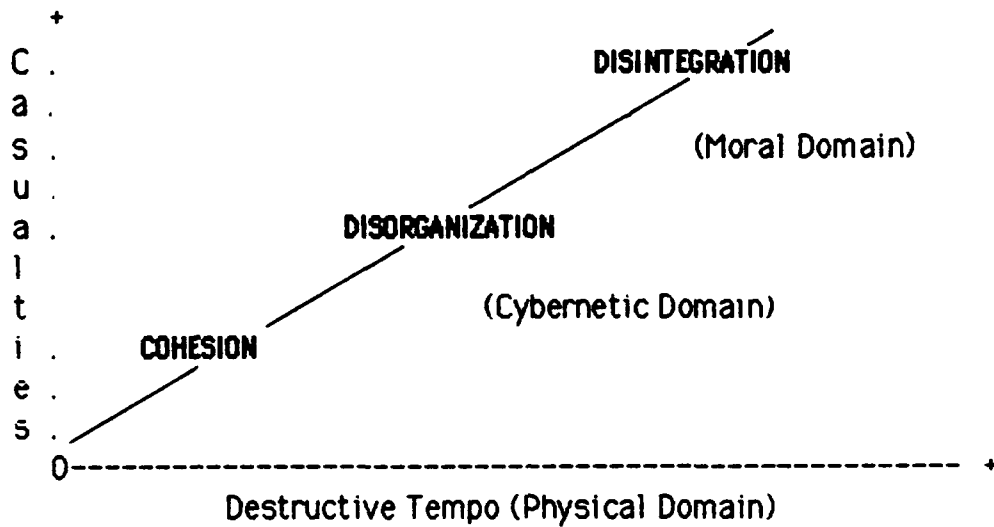
General Beauregard's forces, and eventually attack Grant's army at Shiloh. After the retreat from Perryville, Bragg's army was not pursued by General Buell and was given time to reorganize. He attacked and badly mauled Rosecrans's army at Murfreesboro, turned and attacked again at Chickamauga, and forced Rosecrans's army to Chattanooga. Lastly we have General Hood's retreat from Atlanta coupled with General Sherman's inaction, resulting in General Hood's maneuver against Sherman's lines of communications and supply. However, in this case, the Union had sufficient forces to allow General Sherman to continue his planned march to Savannah, as well as secure his rear areas, resulting in the shattering of Hood's army at Franklin and Nashville.

The last lesson is that the initial expectations of military operations are not always achieved. In 1861, Governor Harris expected a short conflict leading to a settlement. In 1862, General Bragg invaded Kentucky to liberate it from Union oppression because he predicted it would provide supplies and recruits. In 1864, General Johnston optimistically proposed that attacking Sherman's army when the opportunity presented itself would save Atlanta. Finally, General Hood brazenly maneuvered north to sever Union lines of communications and supply since he believed it would prevent

Sherman's army from maneuvering towards Savannah and the sea. In every case, the expectations were not achieved and the army commander was forced to develop new plans. The need to continue operations despite these reversals, leads to the requirement to plan branches and sequels for all military operations, in case the original assessment of the situation and planning assumptions are not valid.

At this point we return to where we began, with the question of why do we need to analyze protracted conflict? As exemplified in Operation Desert Storm, current military technology seems to give the United States a decisive advantage against every potential opponent. However, history shows that technological superiority is transitory. Even with the ability to constantly improve military technology, the United States may fight an opponent who has the skill and mass necessary to overcome the effects of our technology. The inability to reach a rapid decision by military means could lead to a protracted conflict if either side desires to continue and the other cannot force a decision. More importantly, it is the failure to anticipate such a protracted conflict that could mean the difference between victory and defeat.

Appendix 1: The Schneider Model (100)

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  +
C .                                               DISINTEGRATION
a .                                          /
s .                                     /          (Moral Domain)
u .                                /
a .                      DISORGANIZATION
l .                         /
t .                    /            (Cybernetic Domain)
i .      COHESION /
e .        /
s .    /
  0------------------------------------------------------- +
      Destructive Tempo (Physical Domain)
```

Components: Physical Domain
            Cybernetic Domain
            Moral Domain
            Casualties
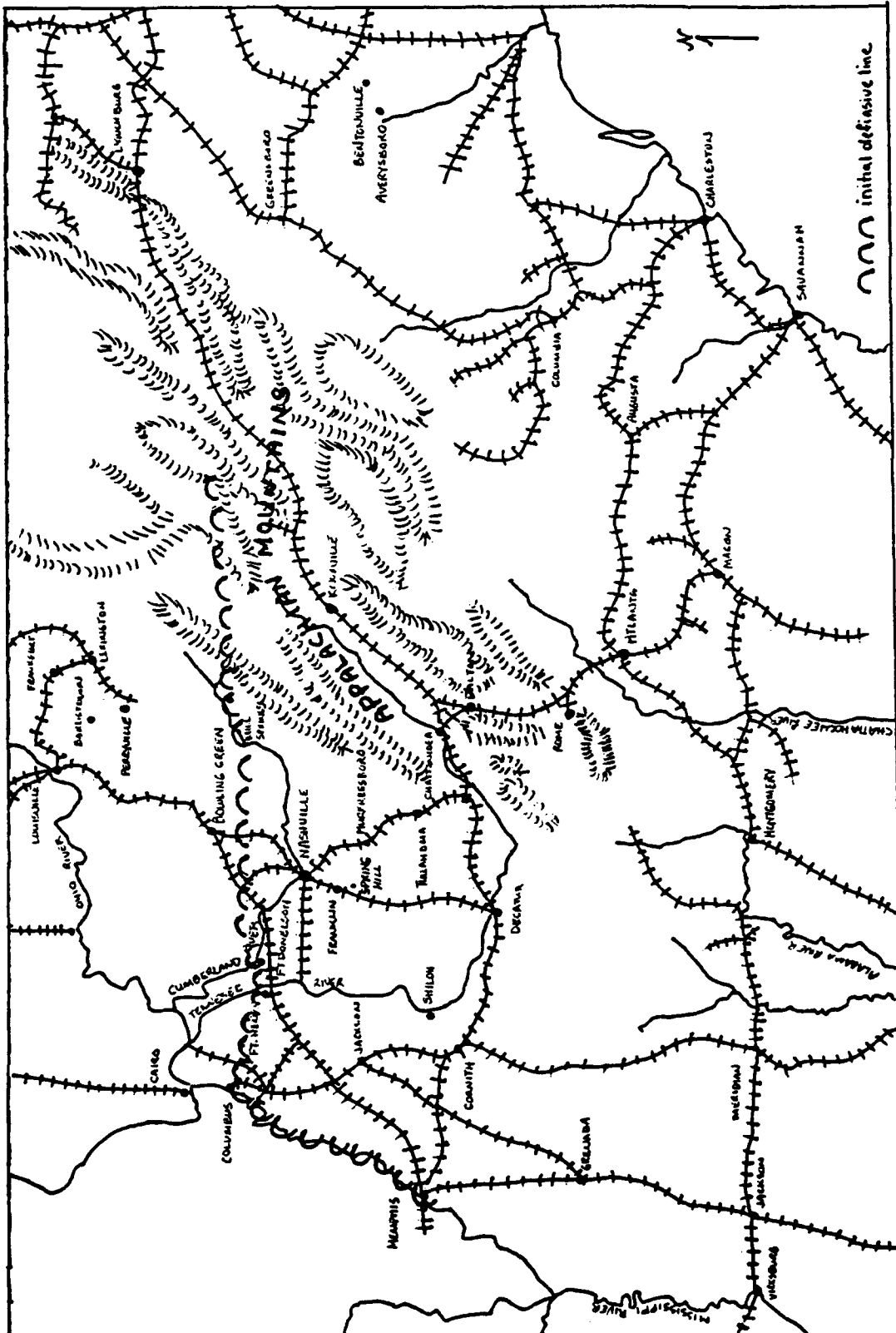
Stages: Cohesion (solid lead)
            Disorganization (liquid lead)
            Disintegration (lead vapor)

            Destructive Tempo--Rate of Destruction (heat)

            Theater of Operations (crucible)

Note: (   ) refers to the lead and crucible analogy. (See page 7)

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ENDNOTES

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[45]Connelly, Autumn of Glory, p. 447, notes that the sequencing of Hood's attack at Peachtree Creek relied on Hardee's Corps starting the attack while Cheatham's Corps waited for the sound of gunfire.

[46]General Johnston's aides, at Shiloh in 1862, had so little information that they did not know where to send the second line of brigades and so told many of them to simply march to the sound of the battle. General Bragg did not believe that Rosecrans's army retreated after Chickamauga in 1863, since his subordinates reported contact with Union defenses after they were empty. General Hood's army was facing north when he believed it was facing west, which partially led

to his failure to attack the Union army as it withdrew towards Nashville in 1864. This information was collected from Connelly, _Army of the Heartland_, p. 160, and _Autumn of Glory_, pp. 229 and 500.

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[49]Connelly, _Autumn of Glory_, p. 187.

[50]Connelly, _Autumn of Glory_, p. 230, gives an example of the different reports that Longstreet sent to General Bragg and Secretary Sedden after Chickamauga.

[51]See "Command" in JCS, _Joint Pub 1-02_, p. 77.

[52]The major reorganizations for the army are: (1) Governor Harris's raising of the Tennessee Army; (2) General Polk's appointment as the Confederate Army commander for Tennessee; (3) General Johnston's appointment as 2d Department commander; (4) General Beauregard's reorganizations during the army's consolidation at Corinth and his interim command after A. S. Johnston is killed at Shiloh; (5) General Bragg's reorganization after the Battle of Perryville which incorporated Kirby Smith's department in Eastern Tennessee; (6) The restructuring into two corps before the Battle of Stones River; (7) The restructuring into three corps with the arrival of General Longstreet's corps from Virginia prior to the Battle of Chickamauga; (8) The changes in corps commanders after General J. E. Johnston replaced General Bragg; (9) The changes in commanders after General Hood replaced General Johnston during the Atlanta Campaign; and (10) The reorganization of the remnants of the army when General J. E. Johnston replaced General Hood in 1865. This information was compiled from Connelly, _Army of the Heartland_ and _Autumn of Glory_.

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[60] Ibid., pp. 361-372.

[61] Ibid., p. 506.

[62] Ibid., pp. 480-482.

[63] Schneider, p. 7.

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[66] Connelly, Army of the Heartland, pp. xii-xiii, 38, and 142.

[67] See "Casualty" in JCS, Joint Pub 1-02, p. 61.

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[72]Ibid., pp. 69, 75-77.

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[91] Ibid., pp. 272-276.

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[94] Connelly, Autumn of Glory, pp. 477-479.

[95] Ibid., pp. 499-506.

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